

AMENDMENT TO THE CLAIMS

1. (Previously Presented) A flexible suspension circuit comprising:

a flexible insulated base;

a plurality of transducer leads printed on the flexible insulated base ; and

a flexure element formed of a shape memory material on the flexible insulated base to provide a flexure force.

2. (Original) The flexible suspension circuit of claim 1 and further comprising flexure leads fabricated on the flexible insulated base and conductivity coupled to the flexure element to supply a voltage potential across opposed ends of the flexure element.

3. (Canceled)

4. (Original) The flexible suspension circuit of claim 1 wherein the flexible insulated base is formed of a polyimide material.

5. (Original) The flexible suspension circuit of claim 1 including a plurality of flexure elements formed of a shape memory material at spaced positions on the flexible insulated base.

6. (Previously Presented) A head suspension assembly comprising:

a suspension portion including a bending portion between a proximal end and a distal end of the suspension portion and the bending portion having a reduced flexure strength; and

a flexure element formed of a shape memory alloy material having an elongated length extending across the bending portion with a first end of the flexure element coupled to the suspension portion proximal of the bending portion and a second end of the flexure element coupled to the suspension portion distal of the bending portion.

7. (Previously Presented) The head suspension assembly of claim 6 wherein the suspension portion supplies a static preload force to a head and the flexure element is energized to release the static preload force for operation.

8. (Previously Presented) The head suspension assembly of claim 6 wherein the flexure element is energized to provide in-situs adjustment of one of fly height of a head or the head suspension assembly or preload force to the head.

9. (Previously Presented) The head suspension assembly of claim 6 wherein the flexure element is printed on a flexible suspension circuit comprising a flexible insulated base having transducer leads printed on the flexible insulated base to electrically interface transducer elements of a head of the head suspension assembly to drive circuitry.

10. (Previously Presented) The head suspension assembly of claim 6 assembled in a disc drive and the disc drive includes a "spin-up" control mode and a "read/write" control mode wherein in the "spin-up" control mode, the flexure element is energized to release a static preload force to reduce stiction during "spin-up".

11. (Currently Amended) The head suspension assembly of claim 10 wherein the flexure element is energized to adjust the preload force to a the head or the fly height of the head or the head suspension assembly in the read/write control mode.

12. (Previously Presented) The suspension assembly of claim 6 including a plurality of flexure elements formed of the shape memory material having opposed first and second ends coupled to the suspension portion proximal and distal of the bending portion.

13. (Previously Presented) The head suspension of claim 6 wherein the suspension portion includes multiple spaced bending portions having reduced flexure strength and at least one of the multiple spaced bending portions includes the flexure element formed of the shape memory alloy material extending thereacross.

14. (Previously Presented) The head suspension of claim 13 including a plurality of flexure elements formed of the shape memory alloy material including a first shape memory flexure element coupled to one of the multiple spaced bending portions and a second shape memory flexure element coupled to another of the multiple spaced bending portions.

15. (Previously Presented) An assembly comprising:  
a head suspension including a suspension portion including a proximal end and a distal end and the suspension portion including a proximal bending region having a reduced bending flexure and the head suspension including a head portion carried proximate to the distal end of the suspension portion; and  
a fly height controller including a flexure element formed of a shape memory alloy energizable to adjust flexure

of the proximal bending region of the suspension portion to adjust a fly height of the head portion of the head suspension.

16. (Previously Presented) The assembly of claim 15 wherein the suspension portion includes a plurality of bending portions including a first bending portion and a second bending portion and the flexure element extends across the first bending portion or the second bending portion.

17. (Previously Presented) The assembly of claim 15 wherein the suspension portion includes a plurality of bending portions including a first bending portion and a second bending portion distally spaced from the first bending portion and the flexure element extends across the second bending portion.

18. (Previously Presented) The assembly of claim 15 wherein the suspension portion includes a plurality of bending portions including a first bending portion proximally spaced from a second bending portion and the flexure element extends across the first bending portion.

19. (Canceled)

20. (Canceled)

21. (Previously Presented) The head suspension assembly of claim 6 wherein the bending portion includes a proximal end and a distal end and the bending portion having a flexure strength increase from the distal end of the bending portion to a distal portion of the suspension portion.

22. (Previously Presented) The assembly of claim 15 wherein the flexure element extends along the proximal bending region.

23. (Previously Presented) A method comprising a step of:  
energizing a shape memory alloy flexure element to adjust flexure of a proximal bending region of a head suspension having a head or slider carried proximate to a distal end of the head suspension to adjust one of a fly height of the head or slider relative to a disc surface or preload force.

24. (Previously Presented) The method of claim 23 and comprising the step of:  
energizing the shape memory alloy flexure element to reduce a pre-load force for contact starts and stops.

25. (Currently Amended) The method of claim 23 wherein the shape memory alloy flexure element is energized to adjust or control the fly height of the head or slider.